

CLAIMS

1. A dental plant *characterized in* a stump prepared in advance in the full variant (VP), and partially realized in the hollow variant
5 (VC), so as to make it completely personalized and suitable for being applied in one single surgical visit as, being out of one single structure, no further surgical re-entry is expected; said stump realized in advance being united to the body of the plant that will be inserted into the bone, called 'fixture', since
10 realization and that may be filed immediately after the surgical operation already in the mouth of the patient: immediately, in the full variant and after the reconstruction of the intra-oral stump in the hollow variant, thus being suitable for the correct insertion of a prosthesis: in fact, it is due to the shape of a
15 truncated cone - called 'abutment' - of the stump inserted into said fixture - in the full variant - that it will be possible to shape, directly in the mouth and with the help of a preparation cutter mounted onto a turbine, a stump having the correct inclination for the correct prosthesis rehabilitation; while the
20 funnel-shaped shell of the trans-mucous part of the stump, in the hollow variant, allows the dentist to personalize the stump, realizing it with a pin out of zirconium fibre and with a polymerized compound safe from fluids, due to just said funnel shape that insulated them from the mucous membrane, so as to
25 obtain a stump with the desired inclination in the desired moment.

2. A dental plant according to claim 1, *characterized in that* – in the hollow variant – it remains partially submerged for the time requested, just surfacing from the mucosa and thus behaving like a trans-mucous plant, so that, once it is filed, it allows to obtain
- 5 a stump having an axis coinciding or angled with respect to the one of the plant, according to the needs of the case, so as to allow to realize and cement during the same visit a provisional tooth or a definitive crown, like a crown out of compound or baked clay or other suitable material.
- 10 3. A dental plant according to the preceding claims, *characterized in* a structure consisting of one single piece – mono-lithe or mono-block, and no longer of two fixtures or abutments or a plurality of separate elements that may be screwed or cemented one to the other.
- 15 4. A dental plant according to claim 1, *characterized in* a case programmed so as to be divided into two portions: one that must remain sterile until it is opened, which coincides with the moment before the insertion of the plant, and that contains the fixture; and one that may be opened before, so as to allow to
- 20 work the stump container therein in laboratory or directly during the visit.
5. A dental plant according to claim 1, *characterized in* a bent pin that may be used in the hollow variant that allows the reconstruction of the stump with the pin at the centre thereof
- 25 also in those cases in which the long axis of the stump is bent with respect to the one of the fixture of the plant.

6. A dental plant according to claim 1, *characterized in that* once a stump suitable for the correct insertion of the prosthesis is obtained, the truncated-cone shape of the abutment in the (VP) allows to model a stump (D) with the correct inclination for the correct prosthesis rehabilitation, directly in the mouth of the patient with a preparation cutter mounted onto a turbine (M).
7. A dental plant according to claim 1, *characterized in* a shell having the shape of a funnel (D), that allows to personalize the stump making it with a pin (G) out of zirconium fibre and with compound, so as to obtain a stump with the desired inclination in the desired moment, because the (VC) plant may remain partially submerged for the time desired just surfacing from the mucosa, thus behaving like a trans-mucous plant.
8. A dental plant according to claim 1, *characterized* – in the (VP) – *in* a fixture with cylindrical or conical shape so that it may be inserted into the hole provided by the dentist in the bone with suitable cutters, and the last thereof shows the shape thereof, even if lightly thinner, for allowing a primary retention of the fixture that may be obtained also due to turns (B), and that allows to screw the plant, until the area (I) for the passage between titanium and zirconium – i.e. on the boundary between neck (C) and the plant and the stump (D) – reaches the edge of the bone crest (I').
9. A dental plant according to claim 1, *characterized in* said turns industrially treated so as to show a rough surface for improving the bone integration, and said turns end up in the smooth area of

- the neck, of variable length, preferably of 2 millimetres and of cylindrical shape, while that part acting as a stump consists in turn of two parts: the first part (D'), called trans-mucous, is cylindrical or of an upside-down truncated-cone, or has the shape of a pressed funnel in the variant with elliptical section; and a second part (D''), of the oral kind, in the shape of a truncated-cone turned upside-down.
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10. A dental plant according to claim 1, *characterized in that* once the extra-oral thinning down has been completed, the case covering the fixture is opened performing a pressure onto the same along a longitudinal line dividing it and forming a point of less resistance for releasing the case from the plant after it has been hooked, by means of a small key (P), onto the hold (D'''), so as to fit the stump also in those cases in which the stump realized in advance in the shape of a truncated-cone, results to be too large and won't fit the area to be provided with a prosthesis, when it pushes on the lateral surfaces of the teeth contiguous to a post-extractive or toothless site.
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11. A dental plant according to claim 1, *characterized in* a fixture (A) and in a stump (D), out of zirconium or compound or other aesthetic and/or transparent material, hollow inside like a funnel, thus allowing the insertion inside the same of a transparent pin (G), out of zirconium fibre, cemented with a photopolimerizable or a self-polimerizing compound, and due to the transparency of the components, forming a mono-block between the walls of the plant - compound and pin out of zirconium fibre
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– so that said compound and said pin project beyond the edges of the funnel-shaped walls which just surface from the mucosa, so as to form a stump projecting like the stump of a natural filed tooth, so as to be the most suitable possible to that particular angulation situation between the crown and the axis of the plant and to the existing inter-dental space.

12.A dental plant according to claim 1, *characterized in* inner surfaces of the hollow having the shape of a cylinder and ending up in a parallelepiped with a square base (E'), or in a pyramid with a square base (E''), with the greater base – in the case of the pyramid with the square base – inscribed in the circular apical base of the hollow cylinder, which is an area for the insertion of the stem of a key or mandarin in the shape of a parallelepiped with a square base (Y) or of a truncated-cone pyramid with a square base (K).

13.A dental plant according to claim 1, *characterized in that* said key is formed by a stem having the function of insertion inside the hollow of the fixture for screwing it into the bone, and by a head (T) – cubic or cylindrical – for allowing the insertion of a ratchet for the screwing manoeuvres of the plant, manual or with a suitable support for counter-angle.

14.A dental plant according to claim 1, *characterized in* a pin (G) out of zirconium fibre, bent or angled, for holding the core (H) of the compound for forming the stump projecting in the oral cavity.